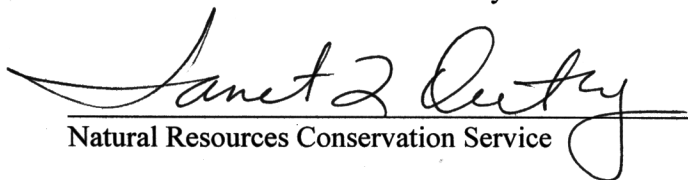


**NATURAL RESOURCES CONSERVATION SERVICE
SOUTH DAKOTA
MAPPING CONVENTIONS FOR
DETERMINING POTENTIAL WETLANDS**

For the Food Security Act of 1985, as amended by
the Food, Agriculture, Conservation and Trade Act of 1990 and
the Federal Agriculture Improvement and Reform Act of 1996;
and Section 404 of the Clean Water Act


We, the undersigned, hereby adopt this document,
as the technical basis
for the identification of potential
wetlands by the Natural Resources Conservation Service


Natural Resources Conservation Service

1-24-02
Date


U.S. Army Corps of Engineers

1-30-02
Date


U.S. Fish and Wildlife Service

1-28-02
Date


U.S. Environmental Protection Agency

2/5/02
Date

INTRODUCTION

This document outlines the procedure the Natural Resources Conservation Service (NRCS) will use to identify potential wetlands. It must be used with the National Food Security Act Manual (NFSAM) and other documents mandated by NFSAM policy (including the Corps of Engineers Wetlands Delineation Manual). It replaces the state's offsite mapping conventions that were completed in May of 2000 and serves as the current Mapping Conventions.

The South Dakota Memorandum of Agreement (MOA) partners have reached consensus on these procedures. This document, which adheres to regulations and policies in effect as of August 1, 2001, may be subject to change based on modifications to the NFSAM or the 1987 Corps Wetland Delineation Manual or other reference documents which impact the use of offsite tools to identify potential wetlands.

If changes are proposed to these mapping conventions or the NRCS-SD onsite determination forms specifically referenced herein, the changes must first receive the concurrence of the signatory agencies before their adoption by the NRCS-SD. If modifications to the mapping conventions or the NRCS-SD onsite determination forms are necessitated by a change in statute, regulation, and/or national policy and procedures (e.g., changes to NFSAM, COE-87 Manual, etc.,) the signatory agencies will review the external changes and concur on any needed changes to the mapping conventions or the NRCS-SD onsite determination forms specifically referenced herein necessary to bring the mapping conventions in line with statute, regulation, and/or national policy and procedures.

This procedure considers landscape, soils, inundation and saturation frequency, vegetation, etc. This procedure is used to determine the location of potential wetlands to better define where field visits are needed to conduct or verify wetland determinations.

GENERAL INFORMATION

1. Persons identifying potential wetlands must have the appropriate Wetland Job Approval Authority delegated and documented in accordance with current NRCS policy.
2. Size of an area is not part of the wetland criteria. Areas large enough to display evidence of potential wetlands on inventory tools or that are noted in the field will be evaluated onsite.

INVENTORY TOOLS

To complete an offsite wetland inventory, the reviewer may choose to begin with one or more resources that maximize the information on the location of potential sites that need to be evaluated in the field. The NFSAM, 513.31, does not limit the resources used for making an inventory. An example would be: a slide or slides; National Wetland Inventory (NWI) map or maps; an aerial photo or photos.

Tools used, where available, for potential wetland identification:

- NRCS Wetland Inventory Maps
- National Cooperative Soil Surveys
- State or local wetland maps
- USDI, Fish and Wildlife Service NWI Maps
- Farm Service Agency compliance slides
- Black and white aerial photography
- Color infrared aerial photography
- Digital orthoquads (DOQQ) imagery
- US Geological Survey topographic maps
- Landsat imagery
- Federal Emergency Management Agency (FEMA) flood hazard maps
- Climatic data
- South Dakota Technical Guide (SDTG) county hydric soils list
- Stream gauge data
- Previous wetland determinations (official and certified determinations)

PROCEDURE

- Step 1.** Review the soil survey and the South Dakota Technical Guide county hydric soils list to identify areas that may be potential wetlands. Identify listed hydric soil map units, map units with hydric soils as part of their name, or soils with hydric inclusions, and map units with conventional wetland symbols as evidence of a potential wetland.
- Step 2.** Review NRCS wetland inventory maps and official determinations, if available, to identify previously mapped wetlands as evidence of a potential wetland.
- Step 3.** Review NWI maps. Identify NWI wetlands as evidence of a potential wetland.
- Step 4.** Based on knowledge of local conditions, use the appropriate FSA slide or slides selected from all available slides (regardless of annual precipitation), to identify potential wetlands. Review 1986 and prior slides to determine if any manipulation occurred prior to the National Food Security Act to help assign the correct wetland determination label.

Any of the following signatures present on one or more slides would be considered as evidence of a potential wetland:

- Hydrophytic vegetation
- Surface water
- Saturated conditions
- Flooded or drowned-out crops
- Stressed crops due to wetness
- Differences in vegetation due to different planting dates
- Inclusion of wet areas as set-aside or idled
- Circular or irregular areas of unharvested crops within a harvested field
- Isolated areas that are not farmed with the rest of the field
- Areas of greener vegetation (especially during dry years)

- Step 5.** Review all other inventory tools (where available) for evidence of a potential wetland.
- Step 6.** All areas displaying potential wetland evidence on inventory tools reviewed in Steps 1 through 5 will be field verified to determine the presence or absence of wetland criteria. **Potential wetlands may be determined to be non-wetlands after field determinations.** Document findings using indicators and procedures described or referenced in Part III, Appendix 4, of the NFSAM, including the COE-87 Manual. Record documentation on forms SD-LTP-28; SD-LTP-29; SD-LTP-30; SD-LTP-31, and SD-LTP-33 to complete the determination.
- Step 7.** Tracts or portions of tracts that display no evidence of potential wetlands after a review of all inventory tools may be labeled as non-wetland (NW) after conducting the onsite determination and/or verifying the absence of wetland criteria. Tracts or portions of tracts that are not inventoried (NI) for potential wetlands will be clearly outlined on the wetland determination map and labeled with an "NI."
- Step 8.** All "Other Waters" determinations and/or delineations will be made by the US Army Corps of Engineers and the US Environmental Protection Agency (NFSAM, 513.22b).

Indicators of "Other Waters" are:

- Open water, dry lake/pond beds, or mud flats on photos.
- Drainage patterns that are evident on available inventory tools.
- Blue lines or similar designations on USGS and/or other maps.
- Features on maps labeled as stream, lake, river, creek, gulch, arroyo, etc.

The "NI" label should be used in those circumstances where either "Other Waters" may be present, or to indicate areas where a detailed wetland inventory has not been conducted (NFSAM, 514.27b).

APPENDIX A

FOOD SECURITY ACT WETLAND LABELS AND DEFINITIONS

Note: *Italicized definitions* apply to Food Security Act wetlands only and are consistent with the 3rd Edition, Amendment 2, of the National Food Security Act Manual (NFSAM). Definitions may be modified by later NFSAM editions or amendments. Nonitalicized definitions or portions of definitions were developed by the states in the Northern Plains Region.

Certified Determination. *All wetland determinations completed after July 3, 1996, are considered certified. This determination has entailed an onsite investigation (see NFSAM, Part 514.11a, Amendment 5, September 2000).*

Determination. *Completing an onsite decision regarding whether or not a wetland exists based upon criteria in effect at the time of the decision.*

Non-wetland (NW). *Land that under natural conditions does not meet wetland criteria (sometimes called upland). Also includes wetlands that were converted to the extent that wetland criteria was not present as of December 23, 1985, but were not cropped.*

Not Inventoried (NI). *No wetland determination has been completed.*

Official Wetland Determination. *A wetland determination made prior to July 3, 1996. This determination may not have entailed an onsite investigation.*

Other Waters of the U.S. (OW). *In South Dakota, the term "Other Waters" of the U.S. (OW) specifically means waters of the United States which are not wetlands. This term is defined in 33CFR 328 and is used in Clean Water Act regulations. "The term Waters of the United States means, all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide: All interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce."*

Soil Map Units. *An area of the landscape shown on a soil map which consists of one or more soils.*

Tract. *A land unit under one ownership operated as a farm or part of a farm.*

Wetland (W). *An area that has a predominance of hydric soils and that is inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances does support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions, except lands in Alaska identified as having a high potential for agricultural development and a predominance of permafrost soils.*

Wetland Determination Map. *Wetland maps provided to producers notifying them of the presence or absence and approximate size and location of wetlands on their land.*

Wetland Job Approval Authority. *A list of people authorized by the NRCS state conservationist to conduct various wetland tasks to meet NRCS responsibilities under the Food Security Act of 1985 as amended.*

WETLAND DETERMINATION RECORD REMOTELY SENSED DATA SUMMARY		
Owner/Operator	Legal Description	County:
Tract No., Farm No.	Field Investigator/Title:	Date:

Interpretation--List of Signatures Observed: NC = No crop; IN = Inundation; CT = Color tone difference; PHM = Potential Hydrological Manipulation

* If using black and white photography, label BW and designate year.

[illegible]

⁴ Percent by species (note if by point transect). Note corresponding reference site, if applicable.

HYDRIC SOIL MATRIX INDICATORS AND DETERMINATION PROCESS

To be used with "Field Indicators of Hydric Soils in the United States, Version 4.0 (March 1998)"
All Landforms in South Dakota

Dig a hole to a depth of at least 20 inches.

Is the soil **Sandy**?

Yes

**Refer to Sandy Soil
Indicators, Back Page**

No

Is the soil loamy with a gleyed color (Hue N, 10Y, 5GY, 10GY, 5G, 10G, 5BG, 10BG, 5B, 10B, or 5PB, with value 4 or more) within 12 inches of the surface?¹

Yes

Use Indicator F2 to verify
(Page 13)
(_____ soil)

No

Does the soil have, starting within 12 inches of the surface, a layer at least 6 inches thick with a gray color (Value ≥ 4 and Chroma ≤ 2) and iron stains or masses (redox)?¹

Yes

Use Indicator F4 to verify
(Page 15) (_____ soil)

No

Is the soil dark colored (Value ≤ 3 and Chroma ≤ 2), and has a layer at least 4 inches thick with iron stains or masses within 12 inches of the surface (2% or more redox if Chroma of 1 or less; 5% or more if Chroma of 2)?¹

Yes

Use Indicator F6 to verify
(Page 16) (_____ soil)

No

Is the soil in a closed depression and have a 2 inch layer with iron stains or masses within 6 inches of the surface?¹

Yes

Use Indicator F8 to verify
(Page 17) (_____ soil)

No

Do you think the soil is Hydric?

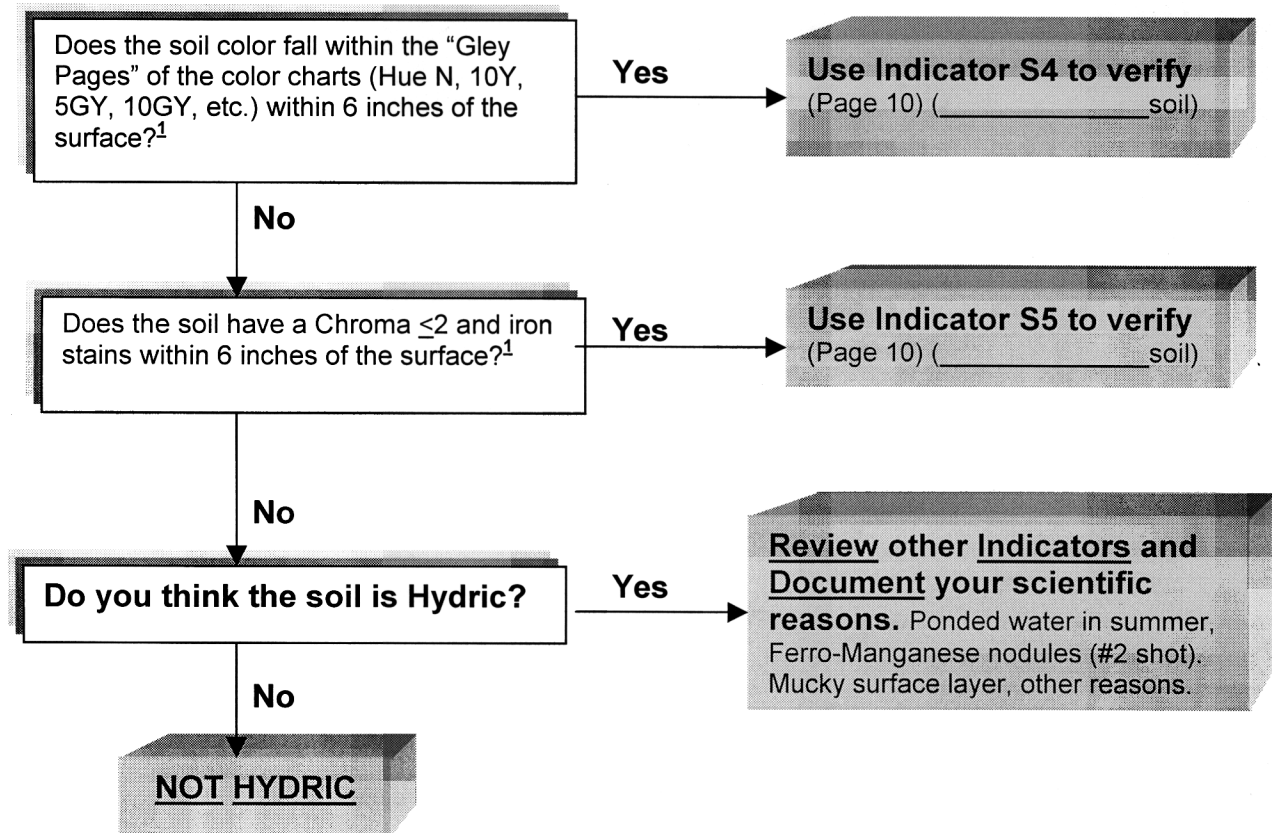
Yes

Review other Indicators and Document your scientific reasons. Ponded water in summer, TF5 or TF7 indicators in depressional soils, Ferro-Manganese nodules (#2 shot), Mucky surface layer, other reasons.

No

NOT HYDRIC

SANDY SOILS



¹ Be sure to refer to the "Field Indicators of Hydric Soils in the United States, Version 4.0 (March 1998)" to verify the indicator chosen for the soil meets all criteria.

HYDROLOGY DETERMINATION METHODS

There are three steps to determine wetland hydrology. The first two steps can only be used to confirm the presence of hydrology.

Step 1. Wetland hydrology is met if one of the following Primary Indicators is present:

Primary Indicators

- INU Inundation:**
- Simply observing the extent of inundation
 - Consider recent weather conditions
- SS Soil Saturation:**
- Requires digging a soil pit to a depth of 16 inches and observing the level to which water rises in the pit
 - The season of the year and weather conditions must be considered
- WM Watermarks:**
- Most common on woody vegetation
 - Stains on bark, fences, bridge pillars, etc.
- DL Drift Lines:**
- Most likely to be found adjacent to streams
 - Evidence is a debris line consisting of branches, leaves, sediment, or other waterborne materials
- SD Sediment Deposits:**
- Plants and other vertical objects have a thin layer, coatings, or depositions of organic matter after inundation
- DP Drainage Patterns Within Wetland:**
- Usually in wetlands adjacent to streams
 - Consists of drainage pattern eroded into soil, vegetation piled against thick vegetation

If Primary Indicators are not met, move to Step 2.

Step 2. Wetland hydrology is met if two of the following Secondary Indicators are present:

Secondary Indicators:

- ORC Oxidized Root Channels in Upper 12 Inches**
- WSL Water-stained Leaves**
- HY Local Soil Survey Data (cannot be used for hydrologically altered sites)**
- Soil is on hydric soils list and/or
 - Soil meets a hydric soil indicator (i.e., F6)
- FNT FAC-Neutral Test**
- When FAC species occur as dominant along with other dominants that are not FAC, the FAC species can be considered as neutral and the decision is based on the remaining species.
 - When the dominant species in a plant community are mostly FAC then ignore the FAC species and determine if $OBL + FACW > FACU + UPL$
- OT Other Factors**
- NWI

If neither the Primary nor the Secondary Indicators are met in the field, move to Step 3.

Step 3. Any Engineering Field Handbook (EFH), Chapter 19 tools would provide a wetland hydrology determination assuring that the preponderance of evidence requirement of the NFSAM, 513.11c is met. Currently this is Procedure 2 as denoted in 650.1903 of Chapter 19 of the EFH (see SD-LTP-33 for methodology).

Tools can be used to confirm the presence or absence of hydrology.

NOTE: The tools cannot override the presence of field indicators in Steps 1 or 2 of SD-LTP-31 (without clear documentation and explanation as to how the preponderance of evidence negates the onsite indicator(s) found (e.g., timing, duration, recorded data).)

USING FARM SERVICE AGENCY (FSA) COMPLIANCE SLIDES AS A METHOD TO EVALUATE HYDROLOGY

This method should be used when evidence of hydrology cannot be determined onsite with Primary or Secondary Indicators. The use of FSA normalized slides as an offsite indicator may be used, as described in Chapter 19 of the Engineering Field Handbook, Procedure 2.

1. Review normal¹ USDA compliance slides using slides from a 20-year period ending with current year. The following signatures are indicators of potential hydrology:

- Hydrophytic vegetation
- Surface water
- Saturated conditions
- Flooded or drowned-out crops
- Stressed crops due to wetness
- Differences in vegetation due to different planting dates
- Inclusion of wet areas as set-aside or idled
- Circular or irregular areas of unharvested crops within a harvested field
- Isolated areas that are not farmed with the rest of the field
- Areas of greener vegetation (especially during dry years)

2. When wetland signatures are apparent, the matrix below will be used:

USDA SLIDES

STATUS

≥50% of all “normal”¹ year slides show signature
of potential hydrology

Hydrology verified

NOTE: Slides from 1986 and prior years should be reviewed to determine if any manipulation occurred prior to the National Food Security Act, to help assign the correct wetland determination label.

¹ Rainfall sheets provided for each field office identify “normal” years. This information was developed based upon techniques identified in Chapter 19 of the USDA Engineering Field Handbook, “Hydrology Tools for Wetland Determination.”